

The composition of organic matter of Domanic deposit of the Bavly field

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Abstract

© 2018, © 2018 Taylor & Francis Group, LLC. Core material taken from Zavolzhsky and Dankovo-Lebedyan horizons of the Bavly oil field attributed to the Domanic deposit is studied by thermal analysis methods. The content of total organic matter, the share of bitumoid and kerogen in it and their fractional composition are estimated. The features of fractional and hydrocarbon compositions of the bitumoids are revealed by thermal analysis, gas chromatography and IR spectroscopy methods. It is shown that, in some cases, the domanic deposit contains light hydrocarbons that can be extracted from the rock using solvents. An estimation of the oil-generating potential of the organic matter of the Zavolzhsky and Dankovo-Lebedyansky horizons is made.

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Keywords

bitumoid, composition, domanic deposit, kerogen, organic matter

References

- [1] Labus, M. 2017. Thermal methods implementation in analysis of fine-grained rocks containing organic matter. *Journal of Thermal Analysis and Calorimetry* 129:965–73.
- [2] Muslimov, R.H. 2007. Oil-and-Gas Potential of the Republic of Tatarstan. *Geology and Development of Oil Fields*. Vol. 1. Kazan, Russia: Publishing House “FEN” of the Academy of Sciences of the Republic of Tatarstan.
- [3] Panarin, A.T. 2016. Russian oil will increment at the expense of Bazhenov formation. *Georesources* 18 (4):325–30. doi: 10.18599/grs.18.4.11
- [4] Sergienko S.R., B.A., Taimova, and V.I., Talalaev. 1979. *High-Molecular Non-Hydrocarbon Compounds of Oil. Resins and Asphaltenes*. Moscow, Russia: Science.
- [5] Stoupakova, A.V. 2017. Domanic deposits of the Volga-Ural basin—types of section, formation conditions and prospects of oil and gas potential. *Georesursy Special Issue* (1):112–24. doi: 10.18599/grs.19.12
- [6] Yusupova, T. N., L.M., Petrova, R.Z., Mukhametshin, C.V., Romanov, T.R., Foss, and Y.M., Ganeeva. 1999. Distribution and composition of organic matter in oil-and bitumen-containing rocks in deposits of different ages. *Journal of Thermal Analysis and Calorimetry* 55:99–107.
- [7] Yusupova, T. N., et al. 1999. Use of thermal analysis in identification of Tatarstan crude oils. *Pet Chemistry* 39(4):227–32.